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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte JOHN DELTA and DONALD BOSIC

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Appeal 2009-000982
Application 09/841,661
Technology Center 3600

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Decided: May 26, 2009

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Before HUBERT C. LORIN, LINDA E. HORNER, and
ANTON W. FETTING, *Administrative Patent Judges*.

HORNER, *Administrative Patent Judge*

DECISION ON APPEAL

STATEMENT OF THE CASE

     John Delta and Donald Bosic (Appellants) seek our review under
35 U.S.C. § 134 of the final rejection of claims 1-35, which are all of the
pending claims. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

SUMMARY OF DECISION

We REVERSE and enter a NEW GROUND OF REJECTION,
pursuant to our authority under 37 C.F.R. § 41.50(b).

THE INVENTION

The Appellants' claimed invention is directed to extended hours trade
filtering. Spec. 1:3-4. Claim 1, reproduced below, is representative of the
subject matter on appeal.

> 1. A computer system executing a trade
> filtering process for identifying suspect trades, the
> computer system executing processes comprising:
>
> a trade monitoring process for monitoring a
> trade price associated with each trade of a specific
> stock during a trading session;
>
> a trade comparison process, responsive to
> the trade monitoring process, for comparing the
> trade price of each trade of a specific stock to a
> known acceptable price for that specific stock to
> identify which trades are suspect trades; and
>
> a suspect trade filtering process, responsive
> to the trade comparison process, for preventing the
> processing of suspect trades.

THE EVIDENCE

The Examiner relies upon the following evidence:

Sposito	US 2001/0042033 A1	Nov. 15, 2001
Kirwin	US 2002/0029180 A1	Mar. 7, 2002
Vogel	US 6,944,599 B1	Sep. 13, 2005

THE REJECTIONS

The Appellants seek review of the following Examiner's rejections:

1. Claims 1-19 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite.

2. Claims 1-19 are rejected under 35 U.S.C. § 101 as being directed to patent ineligible subject matter.

3. Claims 1-4, 12, 23, 24, 30, 31, and 34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Vogel and Kirwin.

4. Claims 5-11, 13-18, 20-22[1], 25-28, 32, and 35 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Vogel, Kirwin, and Sposito.

5. Claims 19, 29, and 33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Vogel, Kirwin, Sposito, and Official Notice.[2]

ISSUES

The Examiner concluded that claims 1-19 are indefinite because they combine two different statutory classes of invention in a single claim. Ans. 3. The Examiner further concluded that claims 1-19 are directed to patent ineligible subject matter because they overlap two different statutory classes of invention under § 101. Ans. 4. The Appellants contend that

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[1] The Examiner includes a discussion of claim 21 on page 11 of the Answer, although claim 21 is not listed in the statement of the rejection in the first paragraph on page 7 of the Answer. *See also* Non-Final Office Action, dated October 18, 2007, at p. 10; App. Br. 23 n.27.

[2] The Examiner rejects claims 19, 29, and 33 under 35 U.S.C. § 103(a) based on Vogel, Kirwin, Sposito, and Official Notice on page 11 of the Answer. *See also* Non-Final Office Action 11; App. Br. 27 n.29; App. Br. 28 n.34.

claims 1-19 are directed to a machine and that one of skill in the computer arts would understand a "computer system" as "a computer executing software routines to provide the recited functions for the claimed machine." App. Br. 10-14.

The first issue presented by this appeal is:

Have the Appellants shown the Examiner erred in concluding that claims 1-19 are directed to two different statutory classes of invention?

The Examiner further concluded that the combined teachings of Vogel and Kirwin render the subject matter of independent claims 1, 23, and 30 obvious. Ans. 5-6. The Appellants contend that Vogel and Kirwin fail to describe or suggest "a suspect trade filtering process, responsive to the trade comparison process, for preventing the processing of suspect trades" as called for in claim 1. App. Br. 16-18.

The second issue presented by this appeal is:

Have the Appellants shown the Examiner erred in concluding that the combined teachings of Vogel and Kirwin would have led one having ordinary skill in the art to a suspect trade filtering process for preventing the processing of suspect trades?

The Examiner concluded that the combined teachings of Vogel, Kirwin, and Sposito render the subject matter of independent claim 20 obvious. Ans. 10. The Appellants contend the combined teachings of Vogel, Kirwin, and Sposito fail to describe or suggest determining which trades are suspect by determining if the price of the trade falls outside of an

acceptable range of prices and preventing processing of the suspect trades.
App. Br. 19.

The third issue presented by this appeal is:

Have the Appellants shown the Examiner erred in concluding that the
combined teachings of Vogel, Kirwin, and Sposito would have led one
having ordinary skill in the art to a process that prevents processing of
suspect trades?

FINDINGS OF FACT

We find that the following enumerated findings are supported by at
least a preponderance of the evidence. *Ethicon, Inc. v. Quigg*, 849 F.2d
1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for
proceedings before the Office).

1.   The Appellants' Specification describes that a processor and
     memory are configured to monitor a trade price, compare the trade
     price to a known acceptable price, and prevent processing of
     suspect trades, and that the processor and memory are incorporated
     into a personal computer, a programmable logic controller, a single
     board computer, or an array of network servers. Spec. 5:3-10 and
     Spec 10:13-20.

2.   An ordinary meaning of "system" in the computer arts is:

     Anything we choose to regard (a) as a whole and
     (b) as comprising a set of related components.
     More formally a system $S = (C, R)$, where C is the
     set of its components and R is the set of

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> relationships (or interfaces) that combine them into
> a coherent whole. In computing the word is freely
> used to refer to all kinds of combinations of
> hardware, software, data and other information,
> procedures, and human activities. An airline
> reservation system, for instance, comprises all
> those things, distributed and connected worldwide.
> At the other end of the spectrum, an *operating
> system just comprises software components.

Valerie Illingworth, *A Dictionary of Computing* 489-90 (New York Oxford University Press) (1997).

3. Vogel discloses a method of data mining after the conclusion of a transaction in order to extract statistical data that can be used, for example, to set fees and provide price guidance to users. The method filters out item data in a report in network-based auction facilities, in which data concerning multiple items is received in a database of a network-based auction facility. Vogel, col. 1, ll. 15-52.

4. Vogel's method compares a price-based value associated with at least one item with a predetermined price-based value, and if the price-based value associated with the item is greater than the predetermined price-based value, the price-based value associated with the item is removed from the further representations of the data, which may include, for example, reports or statistics based on established transactions. Vogel, col. 1, ll. 52-56; col. 5, ll. 54-58.

5. Vogel further discloses that if the price-based value of an item is greater than a predetermined value, an irregular flag associated

          with the item is set and the item is subsequently investigated.

          Vogel, col. 6, ll. 40-43 and ll. 49-51.

6.   Vogel does not disclose using its method for monitoring a trade price associated with each trade of a specific stock during a trading session. Vogel, *passim*.

7.   Vogel does not disclose using its comparison process to prevent the processing of suspect transactions. Vogel, *passim*.

8.   Kirwin discloses a trading interface that allows a trader to use a computer mouse to execute a trade quickly and accurately. Kirwin 1, para. 0002.

9.   Kirwin discloses a system settings screen 400 that allows a trader the ability to specify, using trade preferences, certain aspects of the interface when certain buttons on the interface are pressed. Kirwin 4, para. 0048; Fig. 4.

10.   Kirwin discloses that screen 400 allows the trader to specify limits to prevent accidental entry of a command for a price or size that it outside a reasonably expected range. The limit enables a confirmation alert that prompts the trader for authorization to submit a command for a size larger than the limit. Screen 400 also allows the trader to specify a bid/buy price limit and an offer sell price limit. Kirwin 4, para. 0049.

11.   Kirwin further discloses that screen 400 allows the trader to select to automatically populate a bid/offer with a last trade price or a last bid/offer price. Kirwin 4, para. 0050.

PRINCIPLES OF LAW

35 U.S.C. § 101

35 U.S.C. § 101 states:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

35 U.S.C. § 112

The test for definiteness under 35 U.S.C. § 112, second paragraph, is whether "those skilled in the art would understand what is claimed when the claim is read in light of the specification." *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.,* 806 F.2d 1565, 1576 (Fed. Cir. 1986) (citations omitted).

35 U.S.C. § 103

"Section 103 forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.'" *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See*

also KSR, 550 U.S. at 407 ("While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.")

ANALYSIS

Rejections under 35 U.S.C. § 101 and 35 U.S.C. § 112, second paragraph

The Examiner's rejections of claims 1-19 under 35 U.S.C. §§ 101 and 112, second paragraph, are based on the Examiner's reading of these claims as being directed to two different statutory classes of invention. Ans. 3-4. Claim 1 recites a "computer system" executing processes. We interpret this claimed system to call for a computer (i.e., hardware) that is programmed with software that when executed causes the computer to perform the claimed process steps. Our understanding of the claimed invention is consistent with the description of the computer system provided in Appellants' Specification, which describes hardware, including a processor and memory, configured to perform the recited process steps (Fact 1). Our understanding of the claimed invention is also consistent with the generally understood meaning of a "system" in the computer arts. A "system" is understood generally by those of ordinary skill in the computer arts as referring to a combination of hardware, software, data and other information, procedures, and human activities (Fact 2). In this case, because the term "system" is preceded by word "computer" and because the Appellants' Specification describes a processor and a memory configured to perform the

recited processes, we construe the claimed "computer system" to call for a combination of hardware and software.

As such, we disagree with the Examiner's interpretation of the claims as directed to two different statutory classes of invention. Rather, the claims are directed to a single statutory class of invention, i.e., a machine. Accordingly, we do not sustain the Examiner's rejections of claims 1-19 under 35 U.S.C. §§ 101 and 112, second paragraph.

Rejections under 35 U.S.C. § 103

Independent claim 1 recites a computer system executing "a suspect trade filtering process, responsible to the trade comparison process, for preventing the processing of suspect trades." Independent claims 20, 23 and 30 similarly recite a method and computer program product, respectively, which include the steps of determining which trades are suspect trades and preventing the processing of the suspect trades.

Vogel discloses a method to filter out data of irregular transactions from further representations of data, such as reports or statistics based on established transactions (Facts 1-3). Vogel does not pertain to monitoring the trade price of a stock and does not disclose preventing the processing of suspect transactions (Facts 4 & 5).

Kirwin discloses a trading interface that allows a trader to set system settings to quickly trade stocks using a computer mouse (Facts 6 & 7). Kirwin discloses that the trader can set predefined limits in the system settings to prevent accidental entry of a command for a price or size outside

a reasonably expected range (Fact 8). This limit does not prevent the processing of a suspect trade. Rather, Kirwin's system enables a confirmation alert that prompts the trader for authorization to submit a command for a suspect trade (Fact 8).

The Examiner reasoned that it would have been obvious to modify Vogel's method with the confirmation alert process of Kirwin to prevent processing irregular transactions in Vogel "to minimize expenses associated with rectifying the suspect trade." Ans. 6. Vogel, however, is directed to data mining after the conclusion of a transaction in order to extract statistical data that can be used for setting fees and providing price guidance to users (Fact 1). Vogel's method is not concerned with the processing of the actual transaction and thus is not focused on identifying and preventing the processing of suspect transactions. Further, because Kirwin's confirmation alert process also does not prevent processing of suspect trades, even if the teachings of Kirwin and Vogel were combined, we do not see how this combination would have led one having ordinary skill in the art to redesign Vogel's method to prevent the processing of suspect trades.

The language of independent claim 1 is slightly different than the remaining independent claims, in that claim 1 calls for a suspect trade filtering process "for preventing the processing of suspect trades," while the remaining independent claims each recites a separate element of preventing the processing of suspect trades. The Examiner determined that the recitation "for preventing the processing of suspect trades" in claim 1 is merely a statement of intended use of the claimed trade filtering process.

Ans. 14. To the extent the Examiner further determined that this statement of intended use does not result in a structural difference between the claimed invention and the prior art trade filtering process, we disagree.

Claim 1 recites a computer system executing a suspect trade filtering process for preventing the processing of suspect trades. As we determined *supra*, this claim calls for a combination of hardware and software, where the software is configured to execute the recited processes. Thus, the language "for preventing the processing of suspect trades" requires that the software running in the computer system is programmed to prevent the processing of suspect trades. As such, the processor and memory of the claimed computer are specially configured with software that filters and prevents processing of suspect trades. This is a structural difference between the claimed computer system and the systems of Vogel and Kirwin.

The Examiner relies on Sposito for teaching a last known good price adjustment for adjusting the last known good price of a specific stock being traded to be equal to the trade price of the last non-suspect trade. Ans. 9-10. The Examiner did not rely on Sposito to teach a method that includes preventing processing of suspect trades. As such, the Examiner has not shown how the combined teachings of Vogel, Kirwin, and Sposito would result in the invention called for in independent claims 1, 20, 23, and 30. Accordingly, we cannot sustain the Examiner's rejections under 35 U.S.C. § 103 of claims 1, 20, 23, and 30.

The rejections of the remaining rejected dependent claims 2-19, 21, 22, 24-29, and 31-35 claims rely upon the underlying rejections of

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independent claims 1, 20, 23, and 30. Thus, we also cannot sustain the
Examiner's rejection of these dependent claims. *See In re Fine*, 837 F.2d
1071 (Fed. Cir. 1988) (If an independent claim is nonobvious under
35 U.S.C. § 103, then any claim dependent therefrom is nonobvious).

NEW GROUND OF REJECTION OF CLAIMS 23-29

We enter a new ground of rejection of method claims 23-29 under
35 U.S.C. § 101 as being directed to patent ineligible subject matter. The
law in the area of patent-eligible subject matter for process claims has
recently been clarified by the Federal Circuit in *In re Bilski*, 545 F.3d 943
(Fed. Cir. 2008) (en banc), *petition for cert. filed*, 77 USLW 3442 (U.S. Jan.
28, 2009) (No. 08-964).

The en banc court in *Bilski* held that "the machine-or-transformation
test, properly applied, is the governing test for determining patent eligibility
of a process under § 101." *Id.* at 956. The court in *Bilski* further held that
"the 'useful, concrete and tangible result' inquiry is inadequate [to determine
whether a claim is patent-eligible under § 101.]" *Id.* at 959-60.

The court explained the machine-or-transformation test as follows:
"A claimed process is surely patent-eligible under § 101 if: (1) it is tied to a
particular machine or apparatus, <u>or</u> (2) it transforms a particular article into a
different state or thing." *Id.* at 954 (citations omitted). The court explained
that "the use of a specific machine or transformation of an article must
impose meaningful limits on the claim's scope to impart patent-eligibility"
and "the involvement of the machine or transformation in the claimed

process must not merely be insignificant extra-solution activity." *Id.* at 961-62 (citations omitted).

      The court declined to decide under the machine implementation branch of the inquiry whether or when recitation of a computer suffices to tie a process claim to a particular machine. *Id.* at 962. As to the transformation branch of the inquiry, however, the court explained that transformation of a particular article into a different state or thing "must be central to the purpose of the claimed process." *Id.* As to the meaning of "article," the court explained that chemical or physical transformation of physical objects or substances is patent-eligible under § 101. *Id.* The court also explained that transformation of data is sufficient to render a process patent-eligible if the data represents physical and tangible objects, i.e., transformation of such raw data into a particular visual depiction of a physical object on a display. *Id.* at 962-63. The court further noted that transformation of data is insufficient to render a process patent-eligible if the data does not specify any particular type or nature of data and does not specify how or where the data was obtained or what the data represented. *Id.* at 962 (citing *In re Abele*, 684 F.2d 902, 909 (CCPA 1982) (process claim of graphically displaying variances of data from average values is not patent-eligible) and *In re Meyer*, 688 F.2d 789, 792-93 (CCPA 1982) (process claim involving undefined "complex system" and indeterminate "factors" drawn from unspecified "testing" is not patent-eligible)).

      Method claims 23-29 recite a series of process steps for preventing the processing of suspect trades. The claims do not limit the process steps to

any machine or apparatus. As such, the claims fail the first prong of the machine-or-transformation test because they are not tied to a particular machine or apparatus.

The steps of method claims 23-29 also fail the second prong of the machine-or-transformation test because the data involved in the claim does not represent physical and tangible objects and the claim does not recite any steps that require transformation of data representing physical and tangible objects. Rather, the data used in the claimed steps represents intangible information about a stock trade price, and no transformation of the data occurs by the method steps of the claim. For example, claim 23 recites in the first two steps that the data is monitored and compared to a known acceptable price to determine suspect trades. Thus, the trade price data is not transformed by the first two steps of the claim. Claim 23 further recites that the method prevents the processing of the suspect trades. This last step, however, does not recite any type of transformation of data or any article. Thus, the process of claims 23-29 fails the machine-or-transformation test and is not directed to patent-eligible subject matter under 35 U.S.C. § 101.

<div align="center">CONCLUSIONS</div>

The Appellants have shown the Examiner erred in concluding that claims 1-19 are directed to two different statutory classes of invention, and thereby erred in rejecting claims 1-19 under 35 U.S.C. §§ 101 and 112, second paragraph.

The Appellants have also shown the Examiner erred in concluding that the combined teachings of Vogel and Kirwin would have led one having ordinary skill in the art to a suspect trade filtering process for preventing the processing of suspect trades and that the combined teachings of Vogel, Kirwin, and Sposito would have led one having ordinary skill in the art to a process that prevents processing of suspect trades.

DECISION

The decision of the Examiner to reject claims 1-35 is REVERSED.

We enter a new ground of rejection of claims 23-29 under 35 U.S.C. § 101 as being directed to patent ineligible subject matter.

FINALITY OF DECISION

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b) (2008). 37 C.F.R. § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 C.F.R. § 41.50(b) also provides that Appellant, <u>WITHIN TWO MONTHS FROM THE DATE OF THE DECISION</u>,[3] must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

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[3] This two month time period begins to run from the decided date shown on the front page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

      (1) *Reopen prosecution.* Submit an appropriate
amendment of the claims so rejected or new evidence relating
to the claims so rejected, or both, and have the matter
reconsidered by the Examiner, in which event the proceeding
will be remanded to the Examiner. . . .

      (2) *Request rehearing.* Request that the proceeding be
reheard under § 41.52 by the Board upon the same record. . . .

No time period for taking any subsequent action in connection with
this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R.
§ 1.136(a)(1)(iv) (2007).

<u>REVERSED; 37 C.F.R. § 41.50(b)</u>

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